RANGE USE PLANS

AND RANGE STEWARDSHIP PLANS

Authority:

Forest and Range Practices Act,
Range Planning and Practices Regulation

January 2004

106-05176/

INTRODUCTION

This document is intended to provide guidance to range managers in developing of range use plans and range stewardship plans. The *Range Management and the Forest and Range Practices Act* booklet and the *Range Use Plan Training* course, available from Crown Publications, serve as companion tools to this guidebook. Additional requirements pertaining to these subjects may be found in provincial, regional or district policies and procedures.

Range plans were restructured significantly in 2003. As in the past range use plans are required of all *Range Act* agreements for grazing and haycutting, however the opportunity now exists for agreement holders having a good management and compliance record to submit a range stewardship plan instead. Range stewardship plans are less prescriptive and allow the plan proponents to suggest alternative ways of achieving desired outcomes. Also, the Ministry of Forests will no longer prepare plans. Plan preparation is now the sole responsibility of the agreement holder.

Planning terminology

Goals describe a future vision and are worded to establish broad aims without a specific time-frame. They normally apply to a large planning area such as a Timber Supply Area (TSA), Land and Resource Management Plan (LRMP), or Sustainable Resource Management Plan (SRMP).

Objectives set by government outline end results that will achieve broader goals. They describe desired future conditions, are measurable, time specific and geographically specific.

Strategies describe how to achieve an objective, and pertain to an activity and how that activity is to be conducted. They can apply to entire district, to a range unit, to a specific agreement area, or to a portion of an agreement area. They may be time specific and measurable.

Actions are the activities carried out by the agreement holder to achieve the specified strategies. These include livestock management practices such as salting, herding of livestock, construction of developments, prescribed burning, etc.

MINISTER RESPONSIBILITIES

The minister is authorized to set and provide "objectives set by government" for areas under a range use plan or range stewardship plan. These include the protection and conservation of soils, plant communities, water resources, fish and fish habitats, wildlife populations and their habitats, and biodiversity

The minister:

- will identify any issues specific to the plan area
- will provide range readiness criteria where needed
- may provide stubble heights to address an immediate resource concern.
- may require specified plant communities in certain areas
- may require that the person preparing the range use plan, range stewardship plan, plan amendment or range development proposal, advertise and make the document available for review and comment
- may refer a range use plan or range stewardship plan or an amendment to an advisory committee for its recommendations prior to approval
- must approve a range use plan or range stewardship plan if it is consistent with the agreement under the *Range Act* and conforms with the FRPA and its regulations and standards
- must give reasons for refusing to approve a plan or plan amendment
- will specify the term of the range use plan or range stewardship plan at the time or approval
- may extend the term of a plan for up to 5 years
- will publish a record of enforcement activities and must keep and make available to the public a performance record for holders of agreements under the *Range Act*
- may establish targets for sharing, in specified proportions between or among the holders of range use plans and range stewardship plans, the responsibility to achieve objectives set by government.

AGREEMENT HOLDER RESPONSIBILITES

The agreement holder now bears the sole responsibility for preparation and any advertising and review of the range use plan or range stewardship plan

The agreement holder must consider the minister supplied information, objectives set by government and any higher level plan objectives when determining the grazing schedule and any actions they will take to manage livestock on the rangeland.

The agreement holder must amend a range use plan or range stewardship plan:

- if directed by the minister
- if the plan is not sufficient to achieve intended results
- to deal with issues, or
- if there is a change in land use objectives that affects the area under the plan.

The agreement holder must not graze livestock, cut hay or construct a range development on Crown range until the range use plan, stewardship plan, authorisation request is approved by the minister.

The agreement holder is required to maintain range developments in an effective operating condition.

The agreement holder must make their grazing schedule available to anyone requesting it.

The holder of a range stewardship plan must submit a grazing schedule to the district manager prior to turnout.

The holder of a range stewardship plan must, prior to December 31, annually submit a report to the district manager for grazing activities carried out during the calendar year.

CONTENT OF RANGE USE PLANS

Range use plans are required of all *Range Act* grazing and haycutting agreements. Plans must conform to any prescribed requirements, and be consistent with objectives set by government.

Plan Content for Grazing Agreements

Range use plans for grazing must include the following

1. **A map of appropriate scale and format showing:**
(i) the area of the *Range Act* agreement pertaining to the plan
(ii) locations and types of developments in the area
(iii) pastures/areas to be grazed

2. **A schedule describing for each pasture/area to be grazed**
(i) livestock class
(ii) number of livestock
(iii) period of use

3. **Where prescribed by the minister**
(i) Plant community descriptions and actions to establish or maintain them
(ii) Range readiness criteria
(iii) Stubble heights

4. **Actions to be carried out in the plan area to deal with issues identified by the minister**

5. **Measures to prevent the introduction and spread of invasive plant species**

6. **The signature of the agreement holder or designate**

Plan Content for Haycutting Agreements

Range use plans for haycutting must include the following

1. **A map of appropriate scale showing:**
(i) The area of the *Range Act* agreement pertaining to the plan
(ii) The location and type of range developments in that area

2. **A schedule for each area to be cut describing**
(i) Average stubble height
(ii) Period of haycutting

3. **Actions to deal with issues identified by the minister**

4. **Measures to prevent the introduction and spread of invasive plant species**

5. **The signature of the agreement holder or designate**

QUALIFYING FOR A RANGE STEWARDSHIP PLAN

The minister may authorize an agreement holder to prepare a range stewardship plan that varies from the content requirements of a range use plan if satisfied that the person has demonstrated competence in the management of Crown range.

There are two levels of stewardship plan. Level 1 requires demonstrated competence in management for at least 2 years. Level 2 requires demonstrated competence for at least 5 years. Under a level 2 plan, the proponent can specify intended results, strategies or actions that differ from those normally set by the minister.

The minister will consider the person's performance record, the condition of the Crown range to which the plan would apply, and whether the person has maintained or improved forage quality and quantity on that range. The minister will also consider the written submission by the applicant, their record of continuing education, any letters of recommendation, demonstrated success in complying with previous plans the Act, regulations and standards, any capital investments/developments to manage the range, and if the plan was prepared by a professional agrologist.

The above considerations will also apply when the minister considers whether or not a person continues to qualify for the stewardship plan or whether the term of a range stewardship plan should be extended.

The holder of a range stewardship plan who proposes results that differ from those set by the minister must provide a rationale for the proposal.

A range stewardship plan must have a process for monitoring and evaluating progress toward meeting objectives, results and strategies.

The holder of a range stewardship plan must annually prepare and submit a grazing schedule to the district manager before turnout. They must also, prior to December 31, annually submit a report to the district manager for grazing activities carried out during the calendar year.

CONTENT OF RANGE STEWARDSHIP PLANS

Range stewardship plans must conform to any prescribed requirements, and be consistent with objectives set by government. The holder must annually prepare and submit a grazing schedule to the district manager before grazing livestock on Crown range. The schedule will include the livestock class and number and period of use.

A range stewardship plan must include the following:

1. A map of appropriate scale and format showing:

(i) the area of the *Range Act* agreement pertaining to the plan
(ii) locations and types of developments in the area
(iii) pastures/areas

2. In the case of a

(a) Level 1 range stewardship plan, where prescribed by the minister

(i) plant community descriptions and actions to establish or maintain them,
(ii) range readiness criteria,
(iii) average stubble heights,
(iv) actions to be carried out in the plan area to deal with issues identified by the minister

OR

(b) Level 2 range stewardship plan, intended results that differ from 2(a) and the strategies or actions to achieve them, and a rationale for the proposal

3. Measures to prevent the introduction and spread of invasive plant species

4. A process for monitoring and evaluating progress toward meeting objectives, results and strategies

5. The signature of the agreement holder or designate

Public Participation and Advertising

Though not normally required, the minister may require that a person submitting a range use plan, range stewardship plan, plan amendment or request for range development make it available for review and comment and advertise in a local paper. The public review period is 30 days, and the proponent is required to review all comments and revise the proposal as appropriate.

Amendments to Plans

Amendments to plans may be initiated by the agreement holder or may be required by the minister (e.g., if a plan is unlikely to succeed or, because of special circumstances, or where the plan is inconsistent with new objectives, strategies or measures).

CROWN RANGE DEVELOPMENTS

Range developments include practices, structures, excavations and constructed livestock trails intended for the management of rangeland or livestock.

Development proposals may be generated by:

- agreement holders
- resource agencies
- communities, clubs or individuals

Authorization

All proposed developments require minister consent before any construction or layout takes place. Along with this consent, specifications, revegetation requirements and maintenance responsibilities will normally be included. The minister may require a public review process as previously outlined.

Maintenance responsibilities

The range agreement holder is responsible for maintenance of developments unless granted an exemption by the district manager. If more than one agreement holder is affected, the maintenance responsibility is normally pro-rated based on net authorized AUMs. As a minimum, fences should be checked prior to turnout and maintained to ensure that the fence provides the intended benefit.

Objectives Set by Government Pertaining to Range Use

Values	Objectives
Soils	• Protect soil properties • Minimise erosion and compaction • Minimise undesirable soil disturbance • Maintain a vigorous and diverse cover of desirable plant species with a variety of root depths sufficient to protect the soil • Re-establish ecologically suitable vegetation after disturbance occurs • Maintain ground cover, including sufficient litter, and residual dry matter accumulation to protect the soil • Minimise accelerated soil erosion • Minimise sealing of the soil surface
Plant communities and forage	• Maintain or enhance healthy plant communities including vigour and cover • Maintain or enhance forage quality and quantity for livestock and wildlife • Recruit desirable plants, including through forage seeding • Maintain or improve litter • Enable a range agreement holder to be vigorous, efficient and competitive
Water	• Maintain or improve water resources • Maintain or promote healthy riparian and upland areas • Maintain or promote riparian vegetation that provides shade to maintain water temperatures within the natural range of variability • Maintain or promote desired riparian plant communities
Fish	• Conserve fish, fish habitat and aquatic ecosystems • Manage any adverse effect of deleterious material
Wildlife	• Maintain or promote sustainable healthy, viable, productive and diverse wildlife populations and

Values	Objectives
	their associated habitat • Minimize disturbance during critical periods to wildlife or to wildlife habitats • Manage the risk of interactions between predators and livestock
Biodiversity	• Conserve biodiversity • Maintain native plant community dynamics • Encourage the development of late seral plant communities or other desired communities • Maintain plant communities consistent with natural successional stages on areas where forage seeding is carried out within transitory range areas

Range Readiness Criteria for British Columbia Rangelands

Table 1. Range readiness as defined by leaf development for some common grass species

Species	Leaf Stage
Bluegrasses	2.5
Bluejoint (Canada reedgrass)	3.0
Bromes (introduced)	3.0
Fescue, Altai	4.5
Fescue, Idaho	4.0
Fescue, rough	4.5
Hairgrass, tufted	4.0
Needle-and-thread	3.0
Needlegrass, Columbia	3.0
Needlegrass, stiff	3.0
Orchardgrass	3.0
Pinegrass	2.25 – 2.5 (at nodding)
Porcupine grass	3.0
Ricegrass, rough-leaved	3.0
Wheatgrass, bluebunch	4.0
Wheatgrass, crested	3.5
Wheatgrass, northern	5.5
Wheatgrass, slender	4.0
Wheatgrass, western	4.0
Wildrye, blue	4.0

Stubble Height Criteria for British Columbia Rangelands

Table 2. Average stubble heights for riparian species

Species	Recommended height (cm)
Baltic rush	10
Bluegrasses	10
Bullrushes	Incidental use
Canada reedgrass	12
Cattails	Incidental use
Desert saltgrass	7
Foxtail barley	10
Hairgrass, tufted	12
Kobresia	8
Sedges (large)	20
Spikerush	15

Table 3. Average stubble heights for upland species

Species	Recommended height (cm)
Bluegrasses	8
Bromes (introduced)	10
Fescue, Altai	17
Fescue, creeping red	7
Fescue, Idaho	12
Fescue, rough	17
Needlegrasses	12
Orchardgrass	10
Pinegrass	15
Ricegrass, rough-leaved	8
Timothy, alpine	10
Timothy (domestic)	8
Wheatgrass, bluebunch	15
Wheatgrass, crested	8
Wheatgrass, northern	15
Wheatgrass, slender	15
Wheatgrass, western	12
Wildrye, blue	15

Appendix 1

Plan templates, amendment form and sample approval checklist

This template outlines the elements of plans as required by the *Forest and Range Practices Act* and the Range Planning and Practices Regulation.

RANGE USE PLAN/RANGE STEWARDSHIP PLAN LEVEL 1 or 2

The Minister, pursuant to section 37 of *the Forest and Range Practices Act,* has determined that this plan is consistent with the agreement under the *Range Act* that pertains to the plan, and conforms to the *Forest and Range Practices Act*, the regulations and the standards.

This range use/stewardship plan is associated with the following range agreement(s).

NAME:
ADDRESS:
TELEPHONE:

RANGE AGREEMENT #:
FILE #:
STOCK RANGE:
RANGE UNIT:

This plan was prepared by: _____

Agreement holder's signature* _____ Date _____

_____ Date _____

_____ Date _____

*Or authorized signatory if agreement holder is a corporation

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This plan takes effect: _____
mm dd yy

This plan expires: _____
mm dd yy

Approved: _____

Range Use Plan for Livestock Grazing

A map

Grazing schedule

Pasture Name	*Class and No. of Livestock*	*Period of use*	*Range Readiness Criteria**	*Average stubble height at end of period**

* if required by the minister

Actions to be carried out for prescribed matters and issues identified by the minister

(i) plant communities (if any)

Plant communities	Actions to establish or maintain plant communities

(ii) to address resource features or values

(iii) measures to prevent the introduction and spread of invasive plant species

Signature of agreement holder or designate

Range Use Plan for Haycutting

A map of the area

Schedule

Area to be harvested	*Period of haycutting*	*Average stubble height*

Measures to prevent the introduction and spread of invasive plant species

Signature of agreement holder or designate

Level 1 Range Stewardship Plan for Livestock Grazing

A map

Range readiness criteria (if prescribed)

Average stubble heights (if prescribed)

Actions to be carried for any prescribed matters and issues identified by the minister

(i) plant communities (if prescribed)

Plant communities	Actions to establish or maintain plant communities

(ii) to address resource features

(iii) to address resource values

(iv) measures to prevent introduction and spread of invasive plant species

Process for monitoring and evaluating progress toward meeting objectives, results and strategies

Signature of agreement holder or designate

Level 2 Range Stewardship Plan for Livestock Grazing

A map

Variances and or actions for any prescribed matters and issues identified by the minister

Intended results	Actions to achieve results	Rationale for variance
Readiness		
Stubble heights		
Plant communities		
Resource values		
Resource features		
General wildlife measures		
Wildlife habitat features		

Measures to prevent the introduction and spread of invasive plant species.

Process for monitoring and evaluating progress toward meeting objectives, results and strategies

Signature of agreement holder or designate

Annual grazing schedule for a range stewardship plan

Pasture Name or Area	*Class and No. of Livestock*	*Period of use*

Plan amendment form

The attached plan amendment is submitted pursuant to Section 38 of the *Forest and Range Practices Act*.

Agreement holder's signature _____ Date

_____ Date

This plan amendment is associated with the following range agreement.

NAME:
ADDRESS:
TELEPHONE:

RANGE AGREEMENT #:
FILE #:
STOCK RANGE:
RANGE UNIT:

The minister, pursuant to section 37 of *the Forest Practices and Range Practices Act*, has determined that this Plan Amendment:

1) is consistent with the agreement under the *Range Act* that pertains to the plan, and
2) conforms to the *Forest and Range Practices Act*, the regulations and the standards.

I hereby approve this plan amendment.

Approved by: _____ on _____
Signature mm dd yy

Plan approval checklist

Article	Included	N/A	Comments
Map showing:			
Agreement boundaries			
Locations and types of developments			
Pastures/Areas			
Grazing schedule for plan area			
Livestock class, numbers			
Periods of use			
Range readiness criteria			
Average stubble heights			
Actions to address minister's issues			
Plant communities			
Resource values/features			
Invasive plant species			
Other			
Variances (RSP Level 2)			
Advertised			
Review and comment			

Appendix 2

A template of information provided by the Minister

_____ AGREEMENT AREA

1. Prescribed matters -- plant communities, range readiness criteria and utilization levels

These are plant communities that have been, or may be, significantly affected by livestock use.

Pasture name	*Plant community*	*Range Readiness Criteria*	*Ave. stubble ht. at end of period*

2. Resource issues and features of concern:

Appendix 3 A sample range use plan

Process:

1. The minister provides the following information to the agreement holder:

- plant communities
- range readiness criteria
- stubble heights for areas of concern and browse utilization levels
- any resource features likely to be affected by livestock use
- other resource issues

2. The agreement holder incorporates above information into the plan in the form of actions and also includes a grazing schedule.
3. The plan is advertised and referred if the minister requires.
4. The agreement holder finalizes changes to the plan and submits it to the Ministry of Forests for approval.
5. Staff reviews the plan and completes the checklist.
6. The minister's designate reviews the plan and approves it if it adequately manages the resource.

Plan approval checklist

Article	Included	N/A	Comments
Map showing:			
Agreement boundaries	X		
Locations and types of developments	X		
Pastures	X		
Grazing schedule for plan area			
Livestock class, numbers	X		
Periods of use	X		
Range readiness criteria	X		
Average stubble heights	X		
Actions to address minister's issues			
Plant communities	X		
Resource values/features	X		
Invasive plant species			
Variances (RSP Level 2)		X	
Advertised	X		
Review and comment	X		

RANGE USE PLAN

The Minister, pursuant to section 37 of *the Forest and Range Practices Act*, has determined that this range use plan is consistent with the agreement under the *Range Act* that pertains to the plan, and conforms to the *Forest and Range Practices Act*, the regulations and the standards.

This range use plan is associated with the following range agreement.

NAME: J. P. RANCHER
ADDRESS: BOX 7, SLOW CREEK
TELEPHONE: (250) 555-0000

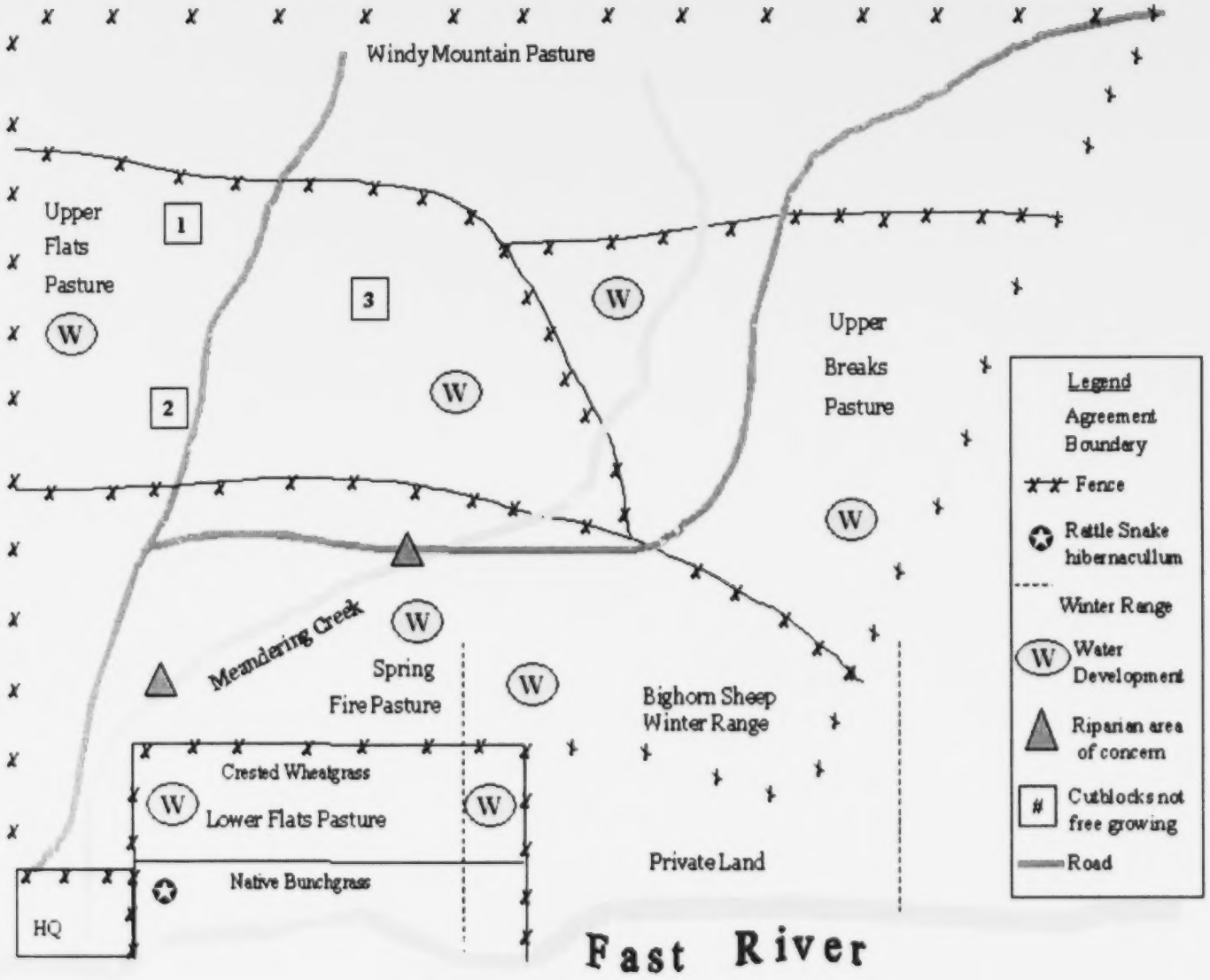
RANGE AGREEMENT #: 675
FILE #: 2000-01
STOCK RANGE: RIVER RANGE
RANGE UNIT: SPRING FIRE

Submitted by _____ on _____
Signature of Range Agreement Holder mm dd yy

This plan takes effect: _____
mm dd yy

This plan expires: _____
mm dd yy

Approved: _____ on _____
mm dd yy


Windy Mountain Pasture
Upper
Flats
Pasture
1
2
3
W
Upper
Breaks
Pasture
Meandering Creek
Spring
Fire Pasture
Crested Wheatgrass
Lower Flats Pasture
Native Bunchgrass
HQ
Bighorn Sheep
Winter Range
Private Land
Fast River
Legend
Agreement
Boundary
Fence
Rattle Snake
hibernaculum
Winter Range
Water
Development
Riparian area
of concern
Cutblocks not
free growing
Road

Grazing schedule

Pasture name	*No. of Livestock by class*	*Period of Use*	*Range Readiness Criteria*	*Ave. stubble ht. At end of period;*	*Plant community*
Lower Flats	100 cow/calf pairs 4 bulls	May 1 to May 31	• Leaf stage of 3.5	• 8 cm	Crested wheatgrass
Spring Fire	50 cow/calf pairs	June 1 to June 30	• Bluebunch wheatgrass at 4.0 leaf stage	• 15 cm on bluebunch • 8 cm on bluegrass	Late seral community of open D.-fir forest, bluebunch w.g. , Rocky mtn fescue
Upper Breaks	50 cow/calf pairs	June 1 to June 30	• Pinegrass 2.25 leaf stage	• 15 cm	Lodgepole pine forest with pinegrass
Windy mountain	50 cow/calf pairs	July 1 to July 21	• Soils dried so grass plants not easily uprooted and trampling will not occur	• 8 cm	Kobresia and willow
Upper Flats	50 pr. cow/calf 50 pr. cow/calf pairs	July 1 to Sept. 15 July 22 to Sept. 15	• 2.25 leaf stage on pinegrass	• 8 cm	Cutblocks with lodgepole pine, pinegrass fireweed and brome

Actions to deal with issues identified by the Minister

Issues	Actions
Meandering Creek. Restoring plant community and PFC	• Livestock use will occur when soils are dried to point where they are not susceptible trampling and compaction • Livestock use will occur prior to mid-July in order to prevent browsing of willow shoots • Livestock will be removed from the riparian portion of the unit when the average stubble height in the key area reaches 8 cm • Livestock will be distributed by daily herding and by placement of salt blocks. Salt blocks will be placed no closer 400 m from the riparian area • 2 off-stream water sites will be developed at kms 3 and 5 of Meandering Creek.
Plantations not free growing	• Not salt within 400 m of plantations • Remove livestock from the unit when a stubble height of 8 cm is reached or prior to Sept. 15.
Western rattlesnake WHA	• A 100-m drift fence will be constructed to exclude cattle from the immediate vicinity of the site. This is shown on the attached map. A 15 cm stubble height on bluebunch wheatgrass applies.
Ungulate winter range for California bighorn sheep	• Spring graze native bunchgrass range to allow regrowth of forage plants. Stubble height on bluebunch wheatgrass will average >20 cm. • Distribute livestock use uniformly by active herding in order to remove decadent old grass growth

The District Manager has provided the following information to the Agreement Holder. It will be retained on file at the Ministry of Forests District Office

XYZ RANCH AGREEMENT AREA

1. Prescribed matters -- plant communities, range readiness criteria and utilization levels

These are the required plant communities.

Pasture name	*Plant community*	*Range Readiness Criteria*	*Ave. stubble ht. at end of period**	*Maximum % browse use*
Lower Flats	Crested wheatgrass	• Leaf stage of 3.5	• 8 cm	• 25%
Spring Fire	Late seral community of open D.-fir forest, bluebunch w.g. , Rocky mtn fescue	• bluebunch wheatgrass at 4.0 leaf stage	• 15 cm on bluebunch • 8 cm on bluegrass	• 25%
Upper Breaks	Lodgepole pine forest with pinegrass	• Leaf stage of 2.25 on pinegrass	• 15 cm	• 25%
Upper Flats	Cutblocks with lodgepole pine, pinegrass fireweed and brome	• Leaf stage of 2.25 on pinegrass	• 15 cm	• 25%
Windy Mountain	Open sub-alpine area dominated by Kobresia, and willow	• Soils dried so grass plants not easily uprooted and trampling will not occur	• 8 cm	• 25%

2. Resource features and issues identified by the minister

i) **Riparian areas and features that are non-functional or at risk.** Portions of Meandering Creek and its adjacent riparian area within the Spring Fire area have received heavy use and are rated as highly at risk. The attached function checklist shows the specific reach and concerns. The goal is to restore a dense corridor of willow through natural recruitment along Meandering Slow Creek within 15 years and to restore damaged stream and riparian sections are to properly functioning condition (PFC) within 10 years.

ii) Plantations labeled 1, 2 and 3 are not free growing. Trampling and browsing of conifer seedlings should be minimized.

iii) There is a western rattlesnake WHA of 200-m radius centered on the communal den site in Lower Flats pasture. This area needs to be protected from cattle use during the spring dispersal period. A 15-cm stubble height applies to bluebunch wheatgrass in the WHA.

iv) There is a California bighorn sheep winter range in the eastern portion of the Spring Fire pasture. The goal is to maintain an adequate fall standing crop of forage. The average stubble height of Bluebunch wheatgrass is to exceed 20 cm.

Streams Riparian Function Checklist

Range Unit: **Windy Mountain** Range Agreement Holder: **XYZ Ranch** Range Agreement Number:			
UTM Coordinates: BEC Subzone:			
Name of Stream: ***Meandering Creek***			
Date: Aug **21/00** Segment/Reach ID: **beaver dam to road** Gradient of Segment: (Low) Medium or High			
Stream type: (Perennial) Intermittent or Ephemeral (Continuous) or Interrupted			
Observers: **R.J. Ranger**			
Yes	**No**	**N/A**	
			Channel Structure, Function and Diversity
✗			Channel characteristics (rocks, large woody debris) and associated floodplain (access to overflow areas) are adequate to dissipate energy.
✗			Channel & banks are relatively stable.
	✗		Lateral movement is associated with natural sinuosity.
	✗		The segment is vertically stable.
	✗		Erosion, deposition and movement of bed materials are normal for this reach.
	✗		Bank shearing, soil compaction, and bare ground are uncommon.
	✗		Sinuosity, width/depth ratio, gradient, pool/riffle ratio, and other aspects of channel geometry are in balance with the landscape setting (e.g., land form, geology).
	✗		Inputs of organic debris from adjacent riparian area and subsequent incorporation into the channel are normal for area.
	✗		Banks are undercut.
	✗		Riffle bed materials and gravels are free of sediment. Fish spawning and use of rock undersides by insects and other invertebrates are possible.
			Flow Regime
✗			Flow rates and timing remain unchanged over time (i.e. perennial to intermittent or ephemeral; continuous to interrupted).
✗			**Biotic Community**
	✗		Roots of trees, shrubs, and grasses extend into the stream. Root masses are capable of withstanding high streamflow events and allowing formation of overhanging banks.
	*✗		The plant community exhibits high vigour and indicates maintenance of riparian soil moisture characteristics.
	✗		Occurrences of trampling, rubbing or browsing are uncommon.
	✗		Riparian plant communities are an adequate source of replacement woody debris, both now and in the foreseeable future.
	✗		A diversity of vertebrate and invertebrate life is evident.
			Nutrient Inputs and Water Quality
✗			Nutrient levels are normal (there is a lack of algae mats and organism die-offs and there is a good aquatic organism diversity)
✗			Inputs of fine organic matter are appropriate (leaves, small branches and twigs).

Check one
PFC
At risk ☒
Non-functional

Notes: Is the desired plant community present (diversity -- species, comp , age classes, structure, form)? **No**
Does the substrate make this stream susceptible to either (vertical) or lateral erosion? **Yes**
Soils types and textures? **medium** Are riparian soils subjected to prolonged saturation and anaerobic conditions? **No**
Is the stream beaver controlled? **Yes** Is the stream (effluent) or influent?
Have land uses altered the dynamics of the system? **Yes**

***Sedge community and associated grasses vigorous however K. bluegrass borders sedge implying drying or narrowing.**
Lack of willows
Kentucky bluegrass